

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

|   |   |  |
|---|---|--|
| Applicant's or agent's file reference<br><b>OPP040038KR</b>               | <b>FOR FURTHER<br/>ACTION</b>   | see Form PCT/ISA/220<br>as well as, where applicable, item 5 below.                        |
| International application No.<br><b>PCT/KR 2004/003212</b>                | (Earliest) Priority Date ( <i>day/month/year</i> )<br><b>9 December 2003 (09.12.2003)</b> | International filing date ( <i>day/month/year</i> )<br><b>8 December 2004 (08.12.2004)</b> |
| Applicant<br><b>ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE</b> |   |  |

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see continuation of this first sheet.

2. ☐ Certain claims were found unsearchable (see continuation of this first sheet)

3. ☐ Unity of invention is lacking (see continuation of this first sheet)

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in the continuation of this first sheet. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 4

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

**Continuation of first sheet****Continuation No. IV:****Text of the abstract****(Continuation of item 5 of the first sheet)**

Disclosed are a method for requesting, generating and distributing a service-specific traffic encryption key in a wireless portable Internet system, an apparatus for the same, and a protocol configuration method for the same. In the present invention, a subscriber station (10) send a Key Request message for requesting a service-specific traffic encryption key to the base station (20,21) using a PKM-REQ MAC message, and a base station (20,21) analyzes the Key Request message to generate the requested service-specific traffic encryption key. Subsequently, the base station (20,21) send a Key Reply message, including the generated service-specific traffic encryption key, to the subscriber station (10) using a PKM-RSP MAC message. If the base station (20,21) fails to generate the key, the base station (20,21) sends a Key Reject message, including a reason for the failure, to the subscriber station (10).

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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR 2004/003212

## A. CLASSIFICATION OF SUBJECT MATTER

IPC<sup>7</sup>: H04N 7/16, H04N 7/173, H04Q 7/22, H04Q 7/38, H04L 29/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC<sup>7</sup>: H04Q, H04L, H04NDocumentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
---Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
WPI, EPODOC, Elsevier, IEE, I3E, IEEEExplore, Research Disclosure, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|-----------|---|-----------------------|
| Y         | IEEE Standard 802.16-2001 for<br><br>Local and metropolitan area networks<br><br>Part 16: Air Interface for Fixed<br><br>Broadband Wireless Access Systems. 8 April 2002<br><br>Pages: 170-192<br><br>--- | 1-22                  |
| Y         | US 2003/0078061 A1 (KIM) 24 April 2003 (24.04.2003)<br><i>figures, abstract, paragraphs 47, 49-51.</i><br><br>---   | 1-22                  |

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

## \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search  
15 July 2005 (15.07.2005)Date of mailing of the international search report  
29 July 2005 (29.07.2005)Name and mailing address of the ISA/ AT  
**Austrian Patent Office**  
Dresdner Straße 87, A-1200 ViennaAuthorized officer  
**MESA PASCASIO J.**

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INTERNATIONAL SEARCH REPORT  
Information on patent family members

International application No.  
PCT/KR 2004/003212

| Patent document cited<br>in search report |   | Publication<br>date | Patent family<br>member(s) | Publication<br>date |
|---|---|---------------------|----------------------------|---------------------|
| A   |   |                     | none                       |                     |
| US  | A | 20030078<br>061     | none                       |                     |